From boatanchors@theporch.com Mon Jan 16 10:40:30 1995
Date: Mon, 16 Jan 1995 08:14:08 -0600
Message-Id: <199501161414.JAA14974@altair.cs.unc.edu>
From: Nick England <nick@cs.unc.edu>
Subject: Re: "Hot Water"

Benton Harbor Trivia-

Don't know the origin, but did you see the following recently? In some mag (maybe the CQ 50th anniversary issue) there was reference to Heath introducing the rig "commonly known as the Hot Water 30". First time I have ever heard a Two'er called that - how about you? I remember Hot Water first applied to the Mono-Banders.

Second, several Heathkits in the 1995 CQ Vintage Radio Calendar - I think all from the collection of Marty Drift WB2FOU? who is listed in ER as the Heath net contact. Anyway, the AT-1 has DX-40 grey knobs (did they ever do that late in the AT-1's life?) and the Apache/Mohawk both have chrome spinner knobs (not skirted like the Marauder, but like the HX-30 6m SSB xmtr knob) - While I haven't ever seen an Apache or Mohawk like that, maybe the last ones were supplied with them - any info Chuck ??

Nick KD4CPL

From boatanchors@theporch.com Mon Jan 16 14:56:23 1995
Date: Mon, 16 Jan 1995 12:27:16 -0600
Message-Id: <Pine.3.89.9501160905.A5119-0100000@netcom18>
From: paul Veltman <veltman@netcom.com>
Subject: Re: "Hot Water"

Nick and all,
I remember the first 'twoer' and 'sixer' from Heath. They were called the "Benton Harbor Lunch Box" because they resembled a kids lunch box. The first HW I remember was the old monoband rigs that were built on one big circuit board. In the early sixties, I built a bunch of the 75M version for the Coconino (AZ) county RACES. They worked fairly well, as I remember. The only problem was that, in mobile operation, the boards tended to flex and crack the circuit board traces.
Remember that Heath never initiated these slang terms such as BHLB and Hot water. These terms were first used by a bunch of smart-ass hams, and were used by Heath only after the terms were universally by the ham community.

Paul WA6OKQ

From boatanchors@theporch.com Tue Jan 17 02:12:17 1995
Date: Mon, 16 Jan 1995 23:55:06 -0600

Message-Id: <2154@sat.ampr.org>
From: ki5sl@sat.n5lyt.ampr.org (Rick_Blank)
Subject: Re: "Hot Water"

In message <199501170126.AA16694@cameron.geom.umn.edu> "penson" writes:
> Thanks for the info, Rick. I'll check around and see what I can find out anout
> about the "harbor on the water." sound plausable enough:)
>
> Chuck
>

--
I have heard stranger things as truth, but not by a very wide margin!

As I said, when I was reading the message on the computer, I was talking to Bill and asked him and I mailed off his reply. He's also in hog heaven today as he picked up a real nice 51-J3 (finally mine is safe from his wanting of it!) and is pleased with how it works...he used these things back when they were new (*he's been a ham since sometime back in the fifties) and he says this one is a keeper....His other main BA receivers are an R-390, an R-390A, and a Racal RA153, (soon he'll have one of my 75A-3's) and he's surprised how well the J3 works compared to the other radios....I'm not, the R-388/51J-3 is one of my favorite rigs, too.

Rick Blank, KI5SL
ki5sl@sat.ampr.org
2223 Blanco Road
San Antonio, Texas 78212
end

From boatanchors@theporch.com Mon Jan 16 15:25:55 1995
Date: Mon, 16 Jan 1995 12:57:45 -0600
Message-Id: <Pine.3.89.9501161150.A1209-0100000@thelair.zynet.com>
From: johnb@thelair.zynet.com
Subject: --==/Wanted/==--

I'm looking for speakers to match the following receivers:

SX28
HQ150
NC100

Thanks! -john

John M. Brewer   wb5oau   " there's a reason the reset button
johnb@thelair.zynet.com   on a PC is on the front panel."

From boatanchors@theporch.com Mon Jan 16 19:54:18 1995
Date: Mon, 16 Jan 1995 17:32:42 -0600
Message-Id: <950116182916_3208365@aol.com>
From: WJoeW@aol.com
Subject: 1625 tubes

I realize these are not a hot item, but I have a box full of new-in-the-box 1625's, if anyone needs some spares for your ARC-5 transmitters, etc. (it is basically an 807 with a 12 volt filament). I will gladly let them go for $1 each, or $10 for a dozen, as long as they last (which may be a long time).

Joe, N5ZYA

wjoew@aol.com

From boatanchors@theporch.com Tue Jan 17 02:16:44 1995
Date: Tue, 17 Jan 1995 00:00:12 -0600
Message-Id: <m0rU6v4-0005MHC@wx8l.tacom.army.mil>
From: q@wx8l.tacom.army.mil (Sean)
Subject: 75A-1 vs 388 advice sought

Hello again,

Well looks like a 75A-1 has come my way, trade for a Johnson Valiant, if I can produce one. Meanwhile, someone has offered the owner of the 75A-1 an R-388 in trade. Since he is holding the 75A-1 for me, he asked wich I would prefer. So, my question is, Which is the better deal? I know the 75A-1 is in excellent condition, except non stock S-meter, and I have plans to pair it up with a 32V-2 I recently aquired. But I'm easy, and if the R-388 is a better deal, I'll take it instead.

Thanks,

Sean (I sure am getting a firery baptism to BA's) McCarthy
q@wx8l.tacom.army.mil

From boatanchors@theporch.com Mon Jan 16 19:31:36 1995
Date: Mon, 16 Jan 1995 17:01:30 -0600
Message-Id: <199501162206.RAA103890@ee.duke.edu>
From: "Rhett T. George" <rtg@ee.duke.edu>
Subject: <didn't bother with a subject>

- Greetings -
Here are a couple of specialty items which make good floats for the anchor
trip lines on boatanchors or may be used in monstrous modulation monitors.
Three TV picture tubes for the price of one - Free.
Hi-Lite 25XP22 - used (condition unknown) - in styrofoam case
Zenith 23VBWP22 - used (condition unknown) - in set
Sylvania 21COP4 - new - in original box
All three together - free to a good, nearby, NC home or to your good friend
who lives nearby in NC and will pick these up.
Rhett George

From boatanchors@theporch.com Mon Jan 16 20:22:10 1995
Date: Mon, 16 Jan 1995 17:52:42 -0600
Message-Id: <199501162352.RAA10946@theporch>
From: detschel@vnet.ibm.com
Subject: <didn't bother with a subject>

Subject:RT-159B/URC-4

Hi to all -
I have one of the abovementioned radios (kind of a
baby boatanchor). It is some kind of a survival radio
apparently for the Air FOrce, and uses the super-mini
tubes. It operates on the distress frequencies. I was
wondering if any body would know what voltages this
thing needs. It has a connector marked 'CX-1093A/U'
which I am assuming is where the power goes. Thanks
for any help.

BTW, talking about boatanchors and the younger
generation - I got my novice back in 1980/81, and
my first rig was a DX-100 with a Hallicrafters
receiver. I used it to QSO my way up to General
speed and upgraded soon after. I eventually sold it
and regret having done so. Even tho it was over
10 years ago, and I am not real young, I am sure
there are others in the new ham generation who are
going thru the same process. Least I hope so. My
oldest son sure is fascinated by them.

73 and happy Boat Anchoring,
Bill Detschel N2IPK
detschel@vnet.ibm.com

From boatanchors@theporch.com Tue Jan 17 03:08:28 1995
Date: Tue, 17 Jan 1995 00:55:53 -0600
Message-Id: <9501141716.aa22574@deincr.theporch.com>

From: jack@deincr.theporch.com (Jack GF Hill)
Subject: A Catalog of Publications

I am lots slower on the draw than some, and as I was perusing the latest (for me) issue of the Yellow Sheets, I came across an item that could be of interest to firebottle aficionados...

Newly expanded Catalog now available: Books, Tech Manuals, other literature, Military: Radio & Electronics and Other Subjects, Amateur Radio: Equipment and Technical, Commercial Radio/Electronics: Equipment and Technical. Thousands of titles in stock. (1900 to present)... send $3.00 for a one year subscription (refundable on first purchase) to:

Keystone Bibliopolist
P. O. Box 34427
Omaha, NE 68134

And, just so no one gets the wrong idea, I have NO financial interest or stake in this guy, just thought it might be of interest.
73,
Jack, W4PPT/M (and sometime list owner)

```
| Jack GF Hill      | Voice: (615) 459-2636 |           Ham Call: W4PPT |
| P. O. Box 897     | modem: (615) 377-5980 |  jack@deincr.theporch.com |
| Smyrna, TN  37167 | Fax:   (615) 459-0038 |         Bicycling & SCUBA |
+        Delker Electronics -- Radio Shack Dealer  # 22-D223            +
```

From boatanchors@theporch.com Mon Jan 16 18:16:49 1995
Date: Mon, 16 Jan 1995 14:19:40 -0600
Message-Id: <9501162018.AA359606@rs2.ccd.harris.com>
From: dsnowden@rs2.ccd.harris.com (Doug Snowden)
Subject: Antenna Question

Did anyone read the article in QSY by N4KG about feeding your tower as a pseudo ground plane antenna? I cannot find the issue and wanted to try it. I sort of know what he did. He fed the radial system with the center conductor of the coax and attached the shield of the coax to the tower. My question is how did he determine how far up the tower to put the radials and feed? I'm sure there was some sort of approximation made based on what type (size) of antenna you had on the top.

Doug, N4IJ dsnowden@cdd.harris.com

From boatanchors@theporch.com Mon Jan 16 11:57:37 1995
Date: Mon, 16 Jan 1995 09:31:54 -0600

Message-Id: <9501161531.AA04173@cen.com>
From: gc@fox.gsfc.nasa.gov (Gary Chatters)
Subject: Re: Audio Oscillator problem...

There haven't been any responses to Carl's question (yet), so I'll give it a try.

Carl, I really couldn't quite figure out the circuit from your description, so my comments will just be general ones.

My philosophy of trouble shooting is to try the simple stuff first. Do as many voltage and resistance measurements as possible before pulling components.

>   Since this is *the* place for beginner's type questions, I'd
>like some sage advice in troubleshooting an audio generator
>
>   This is an RCA WA-44C sine/sq. wave generator that is described
>as a "Bridged-T' oscillator (pentode 6U8A), with a cathode follower
>output stage (6AQ5).   The sine wave function is "stuck" on roughly
>1 cps, which can be viewed on an O'scope...
>   The "Bridged-T" ckt is unfamiliar to me, but has the unique
>feature if having a 3 watt lamp in the cathode ckt of the 6U8 pentode.
>This can be seen to illuminate dimly in unison with the scope trace.
>   Voltages on the 6U8: Plate varies (@ 1cps) from abt +217v to +280v,
>G2: (should be +117v) varies from +125v to +134v. Cathode: (should be +35v)
>varies from +132v to +140vdc @ abt 1cps. Am I correct in thinking that
>this is a key to the problem?? There is a 20mfd 250v cap that rund betw.

Well, yes. If it is supposed to be +35v then this +132 to +140 is a definite problem. :-)

>G2 and the cathode...   The only other voltage paths to the 6U8 cath. are
>a trimmer cap to the 6AQ5 cathode (@ +123v).   Or from the 6AQ5 cath. thru
>a 1mf non-electrolytic, to a 1meg r, and to a 5k pot (bias adj.). On the top

One other current path (well, it is current, not voltage that is flowing) is the tube itself. Either from normal cathode to plate current flow, or an internal short.

Here are some random comments:

You say the cathode voltage, which should be +35v is at +130 or more. So why isn't there smoke just rolling out of this thing? I am surprised that there isn't some component in that cathode circuit that isn't overheating. That is a guess as to an indication of a problem. Maybe all the components can take the voltage. But one thing I would look for would be an open in the cathode circuit.

Take a look at the schematic, try to estimate the DC resistance from
cathode to ground. Then measure it (with everything turned off, of course).
See if maybe there is an open somewhere.

Also, use an ohmmeter to check for obvious shorts. When checking
capacitors, you need to make a guesstimate of the the DC resistance
around the capacitor due to other components.

It should be safe to check voltages with the tube out of the
circuit (but wait to see if anyone corrects me on this.) It
would be interesting to see what the voltage at the cathode
pin is with no tube in the circuit.

[...]

73,

Gary

From boatanchors@theporch.com Mon Jan 16 19:48:31 1995
Date: Mon, 16 Jan 1995 15:03:03 -0600
Message-Id: <950116155755_3074408@aol.com>
From: Randyc3@aol.com
Subject: Cleaning up an HQ160

I just picked up a BA, and am back into it after many years. Last unit was a HQ129X which went to pay the rent back when I was a starving student. (also sold a MINT MacIntosh 275 tube amp but I want to forget about that decision...) I am new to the group, and yes, I did review the FAQs!!

The BA in question is an Hammarlund HQ160 circa 1959, and I would like to tap some of the collected wisdom of the group.
1. User was a smoker and there is light haze on everything. Suggestions on cleaning paint and clear tuning dial covers? Will experiment with the suggestions in the radio+phone FAQs.
2. Inside sheet metal has light corrosion. Appears to be aluminum, although I think the main chassis is plated steel. Again, any suggestions on cleaning? little too deep for auto rubbing compound.
3. I live in a townhouse complex with little room for an longwire. Any suggestions on homebrew antenna solutions? focusing on SWL and BBC DXing.
4. I got a speaker with the radio, not sure which unit it was sold with originally. About 12" square, grey, white "spiderweb" pattern on grill cloth, Hammarlund logo badge in lower right corner. no markings or s/n tag.
 speaker is 6x4. Ideas?

Thanks

From boatanchors@theporch.com Mon Jan 16 09:24:44 1995
Date: Mon, 16 Jan 1995 06:06:26 -0600
Message-Id: <9501161202.AA21505@asterix.isoft.intranet.gr>
From: "PMD G.SIFAKIS" <pmdsif@isoft.intranet.gr>
Subject: Collins 618T

I have the chance to buy a Collins 618T with antenna tuner. Is there any advice regarding operation, pricing or whatever from the wisdom of the list?

George   SV0KA

From boatanchors@theporch.com Mon Jan 16 14:06:49 1995
Date: Mon, 16 Jan 1995 10:58:19 -0600
Message-Id: <24525@w5ddl.aara.org>
From: n5off@w5ddl.aara.org
Subject: Fair Radio Cats for Trade

I have the following Fair Radio Catalogs for trade.

1981
1983
1985 summer sup
1985 fall/winter sup

I'd like to trade for QST's from the 60's, ARRL handbook from the 60's, tube substitution book, etc.

I have to trade these and not sell, cuz the wife will only spend the money on things like food and rent.

73 de tom

From boatanchors@theporch.com Mon Jan 16 01:41:32 1995
Date: Sun, 15 Jan 1995 23:29:11 -0600
Message-Id: <Pine.SUN.3.91.950116001754.4617D-100000@access3.digex.net>
From: Tony Stalls <rstalls@access.digex.net>
Subject: Frostfest

OK BA'ers, where were you? This has been "one of those" weeks and I figured schmoozing with whacko boatanchor guys would be good therapy, so I cruised down to Richmond and slipped and slid all over the skating rink of wet and sweaty floors with my big Magic-Marker "BA" taped to the bottom of my call badge. As far as I could tell, I was either the only one there or we were all orbiting the tables in phase. Admittedly, I didn't stay but a couple of hours since I was anxious to get back in that fun driving-rain rolling traffic jamb on I-95 back up to Arlington.

I talked to a cap maker who said that they could make up almost any logo we want fairly inexpensively. (I hope that's not like a B-2 bomber is fairly inexpensive compared to...) I have their card in my wallet, but unfortunately I'm in the informal non-shopping mode at the moment and I don't have it handy. When a decision is made, I'll dig the card out.

On that note, keep in mind that simple is probably less expensive to reproduce.

73,

Tony
K4KYO

From boatanchors@theporch.com Mon Jan 16 11:42:37 1995
Date: Mon, 16 Jan 1995 09:08:33 -0600
Message-Id: <199501161508.KAA15349@altair.cs.unc.edu>
From: Nick England <nick@cs.unc.edu>
Subject: Frostfest report

Richmond Va Frostfest - medium size indoor event - fills up what I think is an old K-Mart or Woolco discount store. No tailgaters this year due to rain. A good event for NC, VA, DC hams to attend.

Saw several other boat-anchorites there but missed Tony. Bob NA4G also saw several other BA badge wearers that I missed (I made my badge by tracing a 1957 Burstein-Appleby logo - remember the B-A with lightning bolt? thanks to whoever mentioned that as a potential logo)

Apologies for not getting prices on everything - perhaps others can fill in the blanks - but you know how it is in the heat of the moment when you are peering under every table looking for that 75A-4 with a $25 price tag.

People must have been cleaning out their garages over the holidays - I saw more boxes of misc parts, tubes, magazines, and handbooks than at other recent hamfests.

I thought it was a pretty good fest for BoatAnchors. Not a lot of 40's & early 50's stuff unfortunately, but pretty good selection of late 50's and early 60's (what you call the late Boatazoic era I guess).

What did I miss or forget ??

Hallicrafters

```
---------------
SX-42    fair/complete $100 followed me home
SX-111/HT-37  good $250 for pair
SX-117   good     $150
SR-150   good     $250
SX-101   fair     $125
HT-37    parts         $15
TO Keyer
TTO Keyer
Sky Buddy
S-19R

Heath
---------------
no Apache era stuff
SB-102   good     $250
SB-303/SB-401 good $150 good deal
SB-301/SB-401 fair/poor $200  not so good a deal
SB-200        good $300
HG-10 VFO fair $30
HW-16 plus two HG-10   $75  good deal
DX-40    fair/poor $30
VF-1 VFO      $40

Hammarlund
---------------
HQ-129X       good $175
HQ-129X spkr       $20  I sold this one
SP-600        good $225?

National
---------------
NC-303   good     $140 with xtal calib & speaker - unsold
                  he tried $100 without access and still
                  unsold - I thought this was a GOOD DEAL
NC-183   fair     ?
one-ten?      $100 small old rig
HRO-7 rack mnt good    $250
HRO-50 disassembled    ?

WRL
---------------
Globe Scout 40A   good $40 followed me home
TC-6A 6m xcvr     $10 ditto

Collins
---------------
R-390A fair       $250
```

51J	nice	$275?	
75A-2	nice	$275?	
75A-4	dirty	?	
KWM-2		?	

Lafayette

KT-320 rcvr	good	$40	
VFO		?	

Drake

C-line	fair	$400	unsold
C-line	poor	$300	ditto
2C/2NT	good	$150?	
2B		$100	

From boatanchors@theporch.com Mon Jan 16 15:01:40 1995
Date: Mon, 16 Jan 1995 12:29:36 -0600
Message-Id: <"Macintosh */PRMD=MOT/ADMD=MOT/C=US/"@MHS>
From: Chris_Terwilliger-A229AA@email.sps.mot.com
Subject: RE>Grid Dip Meter?

Reply to: RE>Grid Dip Meter?

James Millen is still in business and apparently still has GDO's and coils, as well as other Millen parts.

P. O. Box 4215
Andover MA 01810-4215

508-975-2711
508-474-8949 FAX

```
* Chris Terwilliger, AA7WD                  a229aa@email.sps.mot.com *
* Motorola                                     AA7WD@N7MRP.AZ.USA.NA *
* Phoenix Corporate Research Labs           "If the women don't find *
* 2100 E. Elliot Rd. EL508                 you handsome, they should *
* Tempe, AZ  85284                          at least find you handy" *
* 602-413-5362                                           - Red Green *
```

From boatanchors@theporch.com Mon Jan 16 15:13:43 1995
Date: Mon, 16 Jan 1995 12:36:02 -0600
Message-Id: <199501161835.MAA21694@theporch>
From: Jack Taylor <n7oo@huachuca-emh8.army.mil>
Subject: Heat transfer artwork

I've had success with transfering laser printer artwork to a painted metal panel. The 'secrets' are to give the metal at least two coats of paint and to allow the paint to cure.

My specific example was a large Sprague oil-filled capacitor that (A) had leaked oil and gone bad, (B) was somewhat unique and hard to find a replacement for. After opening up the bottom (soldered) vent holes to make certain all the oil had gone away, I unsoldered the bottom bead with a small propane torch in order to open up the capacitor. This process of course damaged the original paint. I used electrolytics in series to approximate the original capacitance and voltage rating. I very closely duplicated the original Sprague artwork using a shareware program (available on the internet) called Neopaint. To the artwork I added a "box" containing the modification info, the date and my callsign.

Neopaint allows the artwork to be inverted. The inverted artwork was then printed out on a laser printer using common white copy/laser paper.

I had found a ColorKote spray can of satin paint that very closely matched the original light gray on the Sprague can. Two coats were applied and was set aside for a week to cure. The artwork was positioned in place with the ink side contacting the capacitor can. A 2nd piece of clean white printer paper was placed over the artwork to act as an "insulator". With the wife's iron adjusted to the "cotton" range, the artwork was 'ironed' for 1 minute. The artwork paper peeled right off leaving a nicely printed image on the capacitor can.

There were one or two areas of slight marring of the paint. This may have been caused due to the paint not being fully cured. A light buffing with 0000 grade steelwool took care of it, however. This process requires a combination of heat and pressure. To get a good transfer it's important that the surface be very flat so that even pressure can be applied to the artwork from the iron.

I would recommend anyone trying this to experiment on a piece of test panel approximating the same mass and type of paint as the panel to be imprinted.

73 de Jack

From boatanchors@theporch.com Mon Jan 16 04:27:28 1995
Date: Mon, 16 Jan 1995 02:09:22 -0600
Message-Id: <Pine.3.89.9501160359.A15329-0100000@grog>
From: GALBRAITH CHRISTOPHER <99galbra@lab.cc.wmich.edu>
Subject: Heath 400hz CW filter FS...$25

Howdy, almost forgot...a friend has a 400hz CW filter for an SB-101 for

sale. $25 shipped! I have no idea if it works in other SB-line stuff, but its part # is 404-284-1.
73, Chris

From boatanchors@theporch.com Mon Jan 16 06:39:19 1995
Date: Mon, 16 Jan 1995 02:07:07 -0600
Message-Id: <9501160807.AA29299@cybernetics.net>
From: ab4el@cybernetics.net (Stephen Modena)
Subject: History of Electron Tubes

Real "Fire Bottles" reading....

History of Electron Tubes
Edited by S. Okamura
IOS Press, Amsterdam, 1994

ISBN 90-5199-145-2
ISBN 4-274-03444-5-C3054
Library of Congress Catalog Card Number: 93-080285
TK7871.7.H57 1994 (Library call number)

It begins with a quick review of the various European cathode-ray tubes and ends up with up-to-date *Japanesse* power tube descriptions and manufacturing details. In between there is illustration and mention of American tube types known to boatanchor-ites.

However the value of this book may be in the Japanese perspective, with these several examples drawn from the book:

"In 1720, the 8th Shogun Yoshimune admitted import and publication of western books...and a new culture was derived from outside. Usage of electricity commenced at this time. _Electel_ [a publication] was imported from Holland in 1751. Gennai Hiraga repaired a broken electric apparatus in 1776, which was the first electric apparatus in Japan......"

"In 1903, 32 ships out of 56 in the Japanese combined fleet was [sic] equipped with domestic wireless communication equipment. The _Battle of the Sea of Japan_ broke out on May 27, 1905, in which the Japanese fleet struck a fatal hit [sic] on the world famous Baltic Fleet of Russia. The cause of the victory was said to be the world's first _military use of telegram_ sent by Shinanomaru; 'can observe enemy battle ships.' Also the Baltic Fleet was equipped with a Telefunken's wireless telegraph just before its departure, as a matter of course. However, the untrained crew could not completely execute the senior officers' orders, leading to only disorderly rabble. As the telecommunications equipment could not be used properly, it is said to be one of the causes of the defeat of the Baltic Fleet....."

"In September, 1931, the Manchurian Incident broke out, and as the situation got more and more serious, battery-use vacuum tubes were reconsidered for radio receivers in the emergency times, and in areas with no supply of electricity during the day......."

"In 1937, the Chinese incident broke out. [known in the West, I believe, as the Rape of Nanking...and with upward of 10 million murders by that time.] Then, the Japanese government revised the Industrial Association Law extensively, appealing that one could purchase materials together in a group when the union [of participating companies] obeyed the law... [A hint of when and how the Japanese system of interlocking industrial directorates may have had its genesis.]....

"In December, 1941, the Pacific War boke out, and since most of the production capacity of receiving tubes was allocated to military use with shortage of supply to home radio use....The army radar operated at 200 MHz VHF. The receiver used an acorn tube, 954 [:^)], as the high frequency amplifier, and 955 [:^)] as the local oscillator. Toshiba, NEC, Riken and Kawanishi under took the manufacturing of these tubes........"

"In order to detect airplanes flying in from long distances, the Army used the interference method using continuous waves, and had some success in the early stages of the Pacific War. But later on, as the Army shifted to the pulse method, the development of transmitting tubes for this method became necessary......."

"Figure 4.24. No. 2-type 1 radar. The first set equipped in the battle ship _Ise_ sailed out to Aleutian in May 1942, wavelength 1.5 m, peak output power 5 kW, air surveillance radar for vessels......."

"From around 1950, as new technologies became evident by investigating transmitting tubes and the technical papers introduced [sic] from the USA, new products able to replace tubes made in the USA began to be announced one after another by the aid of research conducted by each manufacturing company and also by the technical co-operation with RCA..."

This book is only likely to be found in the library of a university with an Electrical Engineering faculty....I borrowed my copy from the North Carolina State University library...which overall has an amazing collection of books stretching away back. Not bad at all for a "cow palace" Land Grant University. :^)

--

73/Steve/AB4EL ab4el@Cybernetics.NET in Raleigh, NC 35.81245N, 78.65849W

From boatanchors@theporch.com Mon Jan 16 15:01:17 1995
Date: Mon, 16 Jan 1995 12:23:48 -0600
Message-Id: <9501161756.AA08451@altair.krl.caltech.edu>
From: Tim Shoppa <shoppa@krl.caltech.edu>
Subject: Re: History of Electron Tubes

> Real "Fire Bottles" reading....
>
> History of Electron Tubes
> Edited by S. Okamura
> IOS Press, Amsterdam, 1994
>
> ISBN 90-5199-145-2
> ISBN 4-274-03444-5-C3054
> Library of Congress Catalog Card Number: 93-080285
> TK7871.7.H57 1994 (Library call number)
>
> It begins with a quick review of the various European cathode-ray tubes
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>
> However the value of this book may be in the Japanese perspective,
> with these several examples drawn from the book:
>
> "In 1720, the 8th Shogun Yoshimune admitted import and publication
> of western books...and a new culture was derived from outside. Usage
> of electricity commenced at this time. _Electel_ [a publication] was
> imported from Holland in 1751. Gennai Hiraga repaired a broken
> electric apparatus in 1776, which was the first electric apparatus
> in Japan......"

1720? 1751? 1776? I've heard complaints about "revisionist histories", especially with regards to Hiroshima and WWII, but the particular revision of history quoted above is just ridiculous. The phrase "usage of electricity" is more than a little misleading - isn't it hard to really use electricity when the motor, generator, and light bulb hadn't been invented yet? (Oersted began experimenting with loops of wire and magnets in the 1810's). I suppose the above paragraph is referring to things like electroscopes and rubbing glass rods with cat fur?

Of course, I have my own biases: Lee DeForest grew up in my hometown. (Muscatine, IA, even though DeForest made some less than complimentary remarks about my hometown later in his life). I assume that he was at least mentioned in this book?

Again, perhaps the history of the electron tube, as I learned it,
was extremely US-biased. It was based mostly around Edison and DeForest,
then made the next big advances at some labs in England and at
MIT's Lincoln Lab during WWII.

Tim. (KA0BTD)
shoppa@altair.krl.caltech.edu

From boatanchors@theporch.com Mon Jan 16 15:26:21 1995
Date: Mon, 16 Jan 1995 13:02:52 -0600
Message-Id: <9501161901.AA05036@uvs1.orl.mmc.com>
From: padgett@tccslr.dnet.mmc.com (A. Padgett Peterson, P.E. Information Security)
Subject: Re: History of Electron Tubes

And don't forget the DeKalb tubes c.a. WWII that made projected energy and
the "Rolling Roads" possible.
P.fla

From boatanchors@theporch.com Mon Jan 16 21:12:20 1995
Date: Mon, 16 Jan 1995 18:50:32 -0600
Message-Id: <9501170050.AA17992@cybernetics.net>
From: ab4el@cybernetics.net (Stephen Modena)
Subject: Re: History of Electron Tubes

> >
> > History of Electron Tubes
> >
> > "In 1720, the 8th Shogun Yoshimune admitted import and publication
> > of western books...
> > Usage of electricity commenced at this time.
>
> 1720? 1751? 1776? I've heard complaints about "revisionist histories",
> especially with regards to Hiroshima and WWII, but the particular
> revision of history quoted above is just ridiculous.

Let's be careful. The author of that section is trying to say something
about Japanese history...a contradiction characterizing them. They
were/are a closed island society...yet their leaders were judiciously in
contact with the progress and events and powers of the outside world.
He is emphasizing implicitly that while Japan was feudal, it's leaders
with not primitives. I'd have to add that those words would have
applied equally to the Great Russian Empire of *exactly* the same era.

> The phrase
> "usage of electricity" is more than a little misleading - isn't it
> hard to really use electricity when the motor, generator, and light
> bulb hadn't been invented yet?

Does the author assume that the reader knows what "usage" was prevalent then?

> ...(Oersted began experimenting with loops of wire and magnets in the 1810's). I suppose the above paragraph is referring to things like electroscopes and rubbing glass rods with cat fur?

Careful. Electroscopes were important *measuring* instruments...play things for the rich to amuse themselves with. But for the the serious thinker (Ben Franklin, for example) they were the *only* universal indicator of this elusive force that was invisible! Were you to look into a recently publish book on the research notebooks of *Hertz*, you would see that the *electroscope* was a critical instrument in his work on Hertzian waves.

I'm not lecturing you. With a bit of reading in the field of industrial and engineering history, I've come away with a profoundly different view of the intellectual struggle that was involved in trying to come to grip with that invisible magic: electro-statics. The mathematical theories proposed are of the same form as presented today, but various schools of thought argued back and forth because no one could devise a decisive test involving a *machine* design that could be reproduced and replicated easily enough to allow *others* to independently observe and verify experimental results.

>
> Of course, I have my own biases: Lee DeForest grew up in my hometown. (Muscatine, IA, even though DeForest made some less than complimentary remarks about my hometown later in his life). I assume that he was at least mentioned in this book?

Yes, certainly! And Edison, Fleming and many others. Let's be clear: the authors acknowledge where *new* non-Japanese knowledge came from... acknowledge the decision of the times to admit that scientific and engineering progress in the outside World was too important to neglect! The driving theme was always: how soon and by what means would Japan be able to raise itself to an acknowlged *independent* force?

>
> Again, perhaps the history of the electron tube, as I learned it, was extremely US-biased. It was based mostly around Edison and DeForest, then made the next big advances at some labs in England and at MIT's Lincoln Lab during WWII.

Sure enough. And the YAGI is a Japanese invention. :^) The book constantly refers to *American*, British, German and other scientific and engineering

progress... They acknowledge where they copied directly (highly specific on that point)...and where and why they took a parallel or divergent path... sometimes by better idea and often by local contraints of all kinds.
The discussion often gets down to specific American tubes types we all know and how they were imitated or superceded in Japan and why and over what period of times and what event *in Japan* effected those decisions.
For example, the typical 1930's 5-tube superhet 0.3 A heater string did not catch on at first in Japan, because they had excess capacity to produce power transformers *cheaply*. When they became embroiled in war, copper became critical...and they switched to the 6AT-78-6B7-43-25Z5 lineup. Then, because it was costly to generate electricity during WWII, they redesigned their line up accordingly...keeping heater power below 20 W and forcing national standardization on tube compliment. Want to bet that that was essentially the U.S. story in parallel? :^)

What I learned is: they've been players in the field all along.

>
> Tim. (KA0BTD)
> shoppa@altair.krl.caltech.edu
>
--
73/Steve/AB4EL   ab4el@Cybernetics.NET

From boatanchors@theporch.com Mon Jan 16 02:08:24 1995
Date: Sun, 15 Jan 1995 23:53:30 -0600
Message-Id: <Pine.SUN.3.91.950116003358.4617F-100000@access3.digex.net>
From: Tony Stalls <rstalls@access.digex.net>
Subject: Mish/Miltronix R-390A

Hello Fellow BA'ers!

This has been a rough week and although my R-390A got back from Rick Mish on Wednesday, I just now got around to unpacking it. I thought I'd share my first impressions.

His refurbished panel is absolutely perfect. You can't tell it from original unless you look at the back side and see that it isn't new. If I have any criticism, it's that the meter and dial is painted glossy black rather than a flat. The knobs are glossy black too although they look new and that might be how they came.

I won't comment on performance as I've never used an R-390A before and beyond that, I've only tuned around with it for a few minutes. From what I can tell, it seems as if it's probably as good as my HQ-180-AX.

The job was expensive, but he did a lot of work on it. He replaced 10 tubes, 2 pilot lights, recapped the electrolytics, installed a ballast tube mod, the RA and AF gain pots, and a bunch of other parts. He did a good job on the mechanicals as it tunes almost as smoothly as if it weren't a mechanical nightmare. He obviously put in a lot of time and I'm sure that he more than earned his fee. I doubt that he's getting rich doing it. I hope he isn't depending on doing this to make a living!

If there's anything else of significance I find, I'll be sure to let you know.

73,

Tony
K4KYO

From boatanchors@theporch.com Mon Jan 16 14:01:40 1995
Date: Mon, 16 Jan 1995 10:48:27 -0600
Message-Id: <199501161648.KAA15278@theporch>
From: Jack Taylor <n7oo@huachuca-emh8.army.mil>
Subject: Re: Mish/Miltronix R-390A

Congratulations Tony on the "new" R-390A, I hope you derive pleasure from it for many years to come! I just went out into the garage and blew the dust off my R-390A and appears Mish was correct with the gloss black finish. Though my meters appear to be more of a satin black, then gloss. I'd be interested in reports about this topic from other '390 owners.
73 de Jack

From boatanchors@theporch.com Mon Jan 16 19:31:16 1995
Date: Mon, 16 Jan 1995 16:56:09 -0600
Message-Id: <199501162151.PAA51336@rs5.tcs.tulane.edu>
From: Jon Brown <jcbrown@mailhost.tcs.tulane.edu>
Subject: Re: Mish/Miltronix R-390A

>
> Congratulations Tony on the "new" R-390A, I hope you derive pleasure from
> it for many years to come! I just went out into the garage and blew the
> dust off my R-390A and appears Mish was correct with the gloss black finish.
> Though my meters appear to be more of a satin black, then gloss. I'd be
> interested in reports about this topic from other '390 owners.
> 73 de Jack
>   The covers on my meters are satin black, not matte. The
background for the meters is matte black, with radium paint
markings. The meters don't seem to glow much any more.
Regards, Christopher Brown

From boatanchors@theporch.com Mon Jan 16 19:41:21 1995
Date: Mon, 16 Jan 1995 16:50:29 -0600
Message-Id: <Pine.SUN.3.91.950116172017.16203D-100000@access1.digex.net>
From: Tony Stalls <rstalls@access.digex.net>
Subject: Re: Mish/Miltronix R-390A

On Mon, 16 Jan 1995, Greg Dermer wrote:

>
> If you wouldn't mind, could you tell me how much Mish
> charged for the work you described? I have a couple
> 390a's I've wanted to restore. If you'd rather not say,
> I understand.

No problem... Here's what was on the invoice verbatim:

QTY.	DESCRIPTION	COST
2	12AU7/5814	$10.00
2	6AK5/5654	10.00
2	6BA6/5754	10.00
1	6C4/6100	5.00
1	6CD6	5.00
2	6AK6	10.00
2	#328 panel lamps	5.00
1	Ballast tube mod.	15.00
2	Pots R.F./I.F. gain	10.00
5	Filter capacitors	20.00
1	Main tuning knob	5.00
1	RF Deck cover	10.00
1	Audio bypass cap 30 uf @ 30v	N/C
1	Bridge rect. (antenna relay)	N/C
Misc	Repaired dial zero adj, fix cord fuse size, remove improper mod, misc. hardware	N/C
Parts total		$115.00
Labor		250.00
UPS		25.00
Total		$390.00

I should add that Rick called and discussed everything, particularly options like retaining my old panel finish and the RF deck covers before doing them.

Also, there were also two handwritten pages from Rick included with the invoice about the improper modification he found and that he thought it was done by the original GI users, what the "Navy mod" is about and how to use it, tips on calibrating, what the MWO's were, and even a lead on a cabinet. I should add that Rick made red marks on the rear panel for default switch positions, etc.

> Also, do you have a phone number for Miltronix/Mish? Is
> he reasonable to talk to by phone? Is he reasonable to
> deal with otherwise?

Rick is a nice guy and I have been pleased with every aspect of my dealings with him.

He gave me his number, but he asked that I not give it out. He said that he was getting a lot of calls (probably asking for free advice) and he was spending all his time on the phone. I can well understand why because Rick tends to want to be helpful and speaking from my chats with him, he'll talk as long as the caller has questions. He's probably too big an R-390 fan. :-)

I hope this helps.

73,

Tony
K4KYO

From boatanchors@theporch.com Mon Jan 16 21:31:15 1995
Date: Mon, 16 Jan 1995 18:17:13 -0600
Message-Id: <Pine.3.89.9501161813.A205-0100000@ozarks>
From: "C. Frank Gilmore" <fgilmore@ozarks.sgcl.lib.mo.us>
Subject: Re: Mish/Miltronix R-390A

On Mon, 16 Jan 1995, Jack Taylor wrote:

> Congratulations Tony on the "new" R-390A, I hope you derive pleasure from
> it for many years to come! I just went out into the garage and blew the
> dust off my R-390A and appears Mish was correct with the gloss black finish.
> Though my meters appear to be more of a satin black, then gloss. I'd be
> interested in reports about this topic from other '390 owners.
> 73 de Jack

```
>

Have an R-390A that I got new several years ago.  It was made by
Electronic Assistance Corp (Hammarlund) and has been a beautiful
receiver.  I collect military and commercial duty receivers.
..
The meters on this one are flat black as are the controls.  Panel is a
slightly lighter shade of gray than most I have seen.
..
Am a former amateur radio store and warrenty repair station owner from
the good old days.  I was selling Hammarlunds when they had this listed
in their dealer price sheets...it was considerably more than National was
charging me for HRO-500s!!

Enjoy

Frank
K0JPJ ex-W5PVX ...-.-



From boatanchors@theporch.com  Mon Jan 16 12:45:59 1995
Date: Mon, 16 Jan 1995 10:27:31 -0600
Message-Id: <CCMAIL.0093373.384525080095016FCCMAIL@EMIS.HAC.COM>
From: "James C Reid" <0093373@ccmail.emis.hac.com>
Subject: Plastic experiment


Hi Gang,
  Tried a quick and dirty experiment this weekend with a sheet of laser
transparency material.  I figured this plastic would stand up fairly well to
heat since it does go through a laser printer.  I took my flamethrower heat gun
and began moving the plastic back and forth fairly close the end of the gun.
Getting it too close would blow a hole through the sheet and turn the plastic
white around the hole.  A second sheet offered a little better results.  I
heated it as hot as I dared and then pulled the sheet over the top of an empty
beer bottle.  I was able to duplicate the shape of the mouth and the plastic did
cool and retain that shape.  It's not much to go with, but the initial outlay
was about zero.  More as it happens, especially after we see that procedure from
Bill Hawkins.

-Jim




From boatanchors@theporch.com  Mon Jan 16 06:34:58 1995
Date: Mon, 16 Jan 1995 02:32:19 -0600
Message-Id: <9501160832.AA16480@red-eft.la.ca.us>
From: Harris Boldt Edelman <hbe@red-eft.la.ca.us>
```

Subject: Proposed Logo, Revision 1

This one's been smoothed up a bit, and thickened. It now looks very embroiderable. While the attached version's in the original monochrome, NV6H liked a version I printed up Saturday night in red on a grey background. And he didn't say anything at all about my being a Collins bigot, until I mentioned it.

As usual, if you want/need this in another image file format, and/or as a MIME or NeXTMail attachment, or need help decoding this back into a binary for viewing, or want copies in colors of your choice or mine, please let me know by e-mail.

-Harris KB6OWB <hbe@red-eft.la.ca.us>

```
begin 644 ba-logo1.gif
M1TE&.#=AD`"0`*4``````*NKJY&1D8N+BX6%A7%Q<6=G9U=75T-#0ST]/>SL
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M*,7/5SVF*Q,*/!"5!@*%.FMB94K40;<:$N2]',OTYX5F"Y6"8]LTYZ:==,>>
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5?""H$L9(`U+0`/AF^,,@;E40```[
`
end
```

From boatanchors@theporch.com Mon Jan 16 03:59:01 1995
Date: Mon, 16 Jan 1995 01:29:54 -0600
Message-Id: <Pine.3.89.9501160208.A13349-0100000@grog>
From: GALBRAITH CHRISTOPHER <99galbra@lab.cc.wmich.edu>
Subject: Ranger with a linear?

Greetings and glass salutations,
Thanks to all that responded the mi. tuner freebie...it has been spoken for (first response).

I just acquired a Ranger I--and I'm in BA heaven, as it is in nice shape.
Here's a couple questions if anyone would be so kind.
Can I use 6L6GC modulators instead of 1614s?
What is the typical position of the audio gain with a D104 (unamplified)? Mine seems to need 3/4 full open (about 3 o'clock) in order for the mod current to peak around 120mA. I was looking at the audio section and it seems there are a couple 10uF electrolytics--perhaps their leakage could account for a low gain in the first audio stages? (I did check the 12AX7 and 12AU6 and they were a-ok).

Also, I am experimenting with using the Ranger to drive an SB-200 (until I gain the parts and experience for my 813 job!!).
To account for the needed 'headroom' for AM, I theorize that the max. carrier power should be about 200 watts out. The SB-200 gives 500-550 normally, and 200w should leave 300 or so for the modulation.
However, in order to achieve only 200w carrier, I have to reduce the drive on the Ranger. The manual states that one should load the transmitter as usual, then reduce the grid drive for reduced output.

When I do this, the plate current falls from 130mA to around 100, and the ideling mod current falls from 55mA to 50mA. Is this normal? I am most concerned with running the Ranger improperly loaded, and having the audio become distorted. The amp seems it can handle the situation, although the manual says nothing about AM use (except noting the benefit of SSB over AM...HA! I say :).

Any comments would be a blessing.

Also, I'm still looking for a copy of the 75A2 book. In trade I could offer copies of the Ranger I manual, or something else I have!

73, and happy MLK day!
Chris, KA8WFC

From boatanchors@theporch.com Mon Jan 16 11:12:41 1995
Date: Mon, 16 Jan 1995 08:46:59 -0600
Message-Id: <9501161441.AA20818@ausable.crd.Ge.Com>
From: mallick@ausable.crd.ge.com (John Mallick)
Subject: Re: Ranger with a linear?

Chris,

The audio gain in Ranger-I was a bit low and the audio was a bit distorted too. After a bit of detective work, I found out that there was a cold solder joint to the cathode pin on one of the 1614 sockets. You sure could tell, 'cuz one of the 1614's was *really* hot and the other was cool. Fixing that brought the audio level right up, and no more distortion. So, check out the solder joints on the modulator tube sockets, especially if yours is a "kit version" of the Ranger, like I think mine was.

73, John WA1HNL

From boatanchors@theporch.com Mon Jan 16 16:31:51 1995
Date: Mon, 16 Jan 1995 13:39:43 -0600
Message-Id: <9501161939.AA07845@cen.com>
From: gc@fox.gsfc.nasa.gov (Gary Chatters)
Subject: Re: Ranger with a linear?

Chris asks:

>
>Also, I am experimenting with using the Ranger to drive an SB-200 (until
>I gain the parts and experience for my 813 job!!).
>To account for the needed 'headroom' for AM, I theorize that the max.

>carrier power should be about 200 watts out. The SB-200 gives 500-550
>normally, and 200w should leave 300 or so for the modulation.
>However, in order to achieve only 200w carrier, I have to reduce the
>drive on the Ranger. The manual states that one should load the
>transmitter as usual, then reduce the grid drive for reduced output.
>

This is somewhat confusing and I would be interested in where the numbers come from.

If I understand correctly, Chris is using an SB-200 to linearly amplify the AM signal from his Ranger.

Linear amplifiers are normally rated at some PEP output level. They also have some restrictions on average power.

For 100% AM modulation, PEP is 4 times carrier power level. Average power would be somewhat more than carrier level (50% more for 100% sine wave modulation).

Chris says the SB-200 gives 500-550W. Is this PEP output? Or average? If PEP, then the input drive needs to be reduced so that the unmodulated output is 500/4 = 125watts.

I think I need more information to understand this.

73,

Gary

From boatanchors@theporch.com Mon Jan 16 07:39:56 1995
Date: Mon, 16 Jan 1995 05:10:35 -0600
Message-Id: <9501160918.AA23057@kahuna.math.hawaii.edu>
From: jeffrey@math.hawaii.edu (Jeffrey Herman)
Subject: rec.radio.swap

>From: otutatch@postbox.acs.ohio-state.edu (Sergei l. Kulyov)

I'm looking for Heathkit transceiver (HW-101, 102, etc; SB-101,102..). Sergei AA8OT, UA3AP

>From: Cal Eustaquio <ceustaqu@ohm.elee.calpoly.edu>

I'm looking for a Hammarlund HQ-129 style speaker. The grill must be at least intact. I would prefer the logo to be there but that is not necessary. Extra holes are o.k. The speaker doesn't have to be there. I would be willing to pay your reasonable price/swap equipment/or trade

towards materials and labor to restoring/rebuilding your favorite BA
(could include resilkscreening of the unit). I need such a speaker so I
can match my recent rebuild/restoration of a Hammarlund SP-200 I just
finished. This restoration will hopefully become an article in Electric
Radio (a mag for BA nuts like me!). I will mention the contributer's name
in the article. I appreciate your help on this matter. Thanks. Very
sincerely. Cal Eustaquio, N6KYR
Equipment available to swap/partial trade over:
EF Johnson Ranger 2
Heathkit AT-1 w/ spare parts unit
Heathkit HW-101 w/ ps.
Heathkit HR-10B (needs to be realigned)
Atwater Kent model 40 radio (needs work)
Hammarlund HQ-110 with original manual, matching speaker, and original box
EF Johnson Navigator (to be refurbished but I can do the work)
Hallicrafters R-42 bass reflex speaker
EF Johnson Thunderbolt
EF Johnson Invader 2000
Hallicrafters R-46 speaker (contingent upon getting the unit in)
AEA Morse Machine
Philco model 70 cathedral radio

>From: rmccarty@netcom.com
I am looking to buy older Ham Radios. Especially interested in Johnson
Gear. What have You?

>From: murphy@crash.cts.com (Mike Murphy)
I want to purchase a bendix/king military radio type PRC-127

>From: richard@wizard.com (Richard Baldwin)
I would like to buy a Collins 51S1 Shortwave receiver.

>From: murphy@crash.cts.com (Mike Murphy)
Collins 30L-1, winged emb. clean, operating cond. $350 plus UPS

From boatanchors@theporch.com Tue Jan 17 00:36:28 1995
Date: Mon, 16 Jan 1995 22:14:49 -0600
Message-Id: <Pine.3.89.9501162248.A15969-0100000@grog>
From: GALBRAITH CHRISTOPHER <99galbra@lab.cc.wmich.edu>
Subject: T-pad network for the Ranger

Thanks to all who addressed my problems with coupling the Ranger to an
SB-200. On the air reports have indicated that reducing grid drive

introduces some undesirable effects on the audio-the heart of the AM signal. The problem is that the SB-200 needs about 10w of drive for 150w of carrier (the amp is rated at 500-600w PEP, so 150w carrier should leave enough headroom for the audio: 4x150=600w).

I have found an article on a T-pad RF attenuator in the December 1959 QST. This one is adjustable from 0-15dB attenuation, in 3 dB steps. It seems a bit over done for what I need, however. If I can build a T-pad with 6 dB of attenuation, the 35w of the Ranger would be reduced to around 8-9w. The article shows the resistance values for such a network, but I need to know what the power rating is (of each resistor).

The network looks like this:

```
     RFin -> ---------/\/\/\/\/\/----------/\/\/\/\/\/--------- -> RFout
                          R1          |         R2
                                      |
                                      |
                                      /
                                      \
                                R3    /
                                      \
                                      /
                                      \
                                      |
                                      |
                                      |
                                     GND
```

For 50 ohm input and output impedance, and 6 dB attenuation, R1 and R2 are 16.7 ohms, and R3 is 67 ohms.

Here's the REAL stupid question...what power rating should the resistors have in this network? Common sense says 10w, for a dissipation of 30w (35-40w in, 10w out), but I'm sure Ohm's law has a trick up its sleeve of which I'm ignorant. Anybody build one of these?

Also, why can't I just decrease the loading of the Ranger? Normally, for phone the plate current should be 130mA...so why not load it back to 80 or so for 10w out? I know I'm really missing some points here--could someone enlighten?

73 and thanks again, mighty wizards of BA-oz (boz?)
Chris KA8WFC

From boatanchors@theporch.com Mon Jan 16 22:32:01 1995
Date: Mon, 16 Jan 1995 20:07:46 -0600
Message-Id: <"d09I'M9000000000*"@MHS>
From: RICHARD_HUMPHREY@hp5200.desk.hp.com
Subject: RE: Tube abuse

Gently easing power to cold transmitting tubes reminds me of the following. I can't remember where I read it, QST or a club bulletin, but it sounds just idiotic enough to be true.

Ham X bought a linear amp using filament type tubes. Not having cathodes to heat up for 2 or 3 minutes, the amp manufacturer noted that the unit was 'instant on'. Throw the switch and talk.

X started calling Eimac to gripe about having to replace their lousy tubes in this amp on a 'weekly' basis. They repeatedly failed after just a few hours service.

Further investigation by a customer service rep revealed that the ham had installed a relay in the AC line to the amp and was switching it from his rig's vox circuit. "It's instant on! Saves power between transmissions!"

Is that cause for license revocation?

Richard
N6NAE   "Dip the grid, peak the plate,
                           Watch your tubes evaporate."

From boatanchors@theporch.com Mon Jan 16 01:45:27 1995
Date: Sun, 15 Jan 1995 23:35:10 -0600
Message-Id: <9501160518.AA28961@texan.frco.com>
From: bill@texan.frco.com (William Hawkins)
Subject: vacuum forming

The Northland antique Radio Club (that's NARC) held its winter workshop today. They talked about "curtain-burners" (resistance line cords) and battery eliminators. Then a man got up and said he'd been doing vacuum forming of dial covers for 8 years. He now gets $15 for a Catalin dial, but doesn't want to do one-offs, so he's willing to tell us how he does it. (Look at Catalin prices if you wonder why prices don't match the functionality!) I can tell you that the secret is Wesson oil. You need a 5 lb coffee can, a portable vacuum cleaner, a piece of 1/4" plastic, a mold, a sheet of butyrate (NOT acrylic) plastic, and a heat gun. Oh, and some other stuff, like cardboard and tape.

If anyone is interested, I can mail you my description of his technique.

If a lot of you are interested, I'll post it.

Never did hear about baked-on enamel, though.

Bill Hawkins

From boatanchors@theporch.com Tue Jan 17 03:05:01 1995
Date: Tue, 17 Jan 1995 00:43:11 -0600
Message-Id: <9501170640.AA29573@texan.frco.com>
From: bill@rosevax.rosemount.com (William Hawkins)
Subject: vacuum forming

[There were lots of requests for this.]

Vacuum forming radio dials, from the NARC meeting of 15 Jan 95.

First, you need a mold. Don't try to make a casting of the part, because shrinkage will make it too small [there must be a way around this?]. Instead, cast a block of fiberglass resin (no fiberglass) somewhat bigger than what you need. Automotive stores sell the resin [it is amber colored]. When it is cured, use a belt sander to sculpt it to the required shape. Cut it to the max height first, then work towards the edges. Sand it with increasing grits to 600, then use plastic polish to finish it. Glue a tripod of small spacers (double #10 washers) to the back of the mold, to let air escape under it.

Next, you need a vacuum and a container for it. Cut a hole in a 5# coffee can that will fit the hose of a portable vacuum cleaner, and provide a seal for it. Volkswagen has a suitable seal. The seal does not have to be molecular, just enough to make the vacuum cleaner scream as if you had blocked its hose with the palm of your hand. Then take a piece of about 1/4 inch thick plastic that will cover the can [and is at least two inches wider than your mold on all sides]. Drill a couple of 1/4 inch holes in an area under the mold, towards the center. Use something to seal it to the top of the coffee can, remembering that the vacuum will pull the plate to the can. Attach [tape] a cardboard riser to the plate that will be about half the height of the mold and about an inch away from the mold on all sides.

Now, you need something to be molded. The recommendation was 8X10 sheets of 15 mil (.015 inch) Butyrate plastic from K&S Engineering in Chicago [sorry, no further info].

The procedure proceeds in the following manner:

Clean the mold with a little spray Windex. Clean the sheet, too. Put the mold in the center of the plate on the coffee can. Pour a little Wesson oil over it [don't use anything to spread it around]. Cover the mold with the plastic sheet, and tape the edges to the riser, so that it is sealed.

Start the vacuum, with the port open [I forgot to describe the port. There is a valve on the vacuum hose that reduces the vacuum by letting in air. The vacuum should be running, but not screaming]. Take a "cheap" heat gun [about a kilowatt] and begin heating the plastic over the center of the mold. Spread it around a bit, but not far from the center. When it begins to draw, under the influence of the weak vacuum, close the valve to get a strong vacuum [screaming]. Work the heat gun around the edges to complete the casting.

When it has formed the edges, remove the heat and open the valve, but don't shut off the vacuum. Let it run for a minute or so while the plastic cools. The result is what you wanted, if you were careful with the mold.

A person in the audience said he worked for a company that did vacuum forming. They use radiant heat to soften the plastic, then drop it onto the mold, under vacuum. This is like heating until you see deformation, then closing the vacuum valve. Also, radiant heat doesn't work well on clear plastic. However, the tip of the heat gun clearly showed red heat inside it before the vacuum valve was closed.

The limit of this procedure is about 3/8 of an inch draw [mold thickness]. Larger draws require a "helper" mold, that pushes the plastic down over the mold.

That's it. If there's any questions, I can try to forward them to the person who gave the talk.

Bill Hawkins

From boatanchors@theporch.com Mon Jan 16 19:00:47 1995
Date: Mon, 16 Jan 1995 16:41:29 -0600
Message-Id: <Pine.SUN.3.91.950116163822.16203C@access1.digex.net>
From: Tony Stalls <rstalls@access.digex.net>
Subject: Vienna (VA) Winterfest - 2/26/95

The Vienna Wireless Association will hold its 19th annual ARRL Sanctioned "Winterfest" on Sunday, February 26, 1995, at the Vienna Community Center on Park Street in Vienna, Virginia. Indoor areas will open at 7:30 AM.

The "frostbite" tailgate opens at 6:00 AM, first come, first served. Admission: $5 (XYL's free). Tailgate space $10. DXCC field checks, prize drawings hourly between 9:00 AM and 3:00 PM.

Vienna, VA, is located about 10 miles west of Washington, DC.

Directions:

Going from the Washington Beltway (I-495), exit on Route 7 West. After passing Tyson's Corner Shopping Mall on the right at about 2 miles, you go under the Route 123 underpass. Take the right ramp onto southbound Route 123 (Maple Street) for 2 miles and turn left onto Park Street.

OR...

Take the north Nutley Street exit off of I-66. Nutley Street runs into Route 123 (Maple Street). Turn right on Maple Street and after another 2 miles, turn right on Park Street. The Vienna Community Center is about 1/4 mile on the right.

Parking is in short supply and some neighboring streets have parking restrictions. The police vigorously enforce the parking ordinances on the day of the Winterfest. There will be a free bus to and from the site at the Vienna Metro stop. (You may either take the Orange Line or park free in the Metro lot.) The stop is at the I-66 Nutley Street north exit.

Talk-in: 146.31/.91 and 146.085/.685

If I've left anything out, or you have any questions, contact Jorge, KD4GDQ, 703-729-4711

From boatanchors@theporch.com Mon Jan 16 21:45:38 1995
Date: Mon, 16 Jan 1995 19:21:12 -0600
Message-Id: <m0rU2bp-0005MHC@wx8l.tacom.army.mil>
From: q@wx8l.tacom.army.mil (Sean)
Subject: WTB: AX9909's am I dreaming?

Hello Anchorites,

A friend is in need of 2 AX9909 tubes for his Globe Champion 300A. We have been told their hard to find, so if you have a pair, or a good source for a pair, let me know.

Sean q@wx8l.tacom.army.mil

From boatanchors@theporch.com Mon Jan 16 23:45:22 1995
Date: Mon, 16 Jan 1995 21:13:41 -0600
Message-Id: <9501170313.AA14393@cen.com>
From: gc@fox.gsfc.nasa.gov (Gary Chatters)
Subject: Yet another FrostFest report

Nick gave a good report on FrostFest. I can only add a little.

This was a reasonably good hamfest for boatanchors. Overall, it is unusually good for an indoor hamfest. It was not as crowded as some of them get and there was a lot of 'tailgate quality' equipment. The new computer dealers were few. It took about 2.5 hours to get around to everything, including a couple of trips to the car. This is a good size for a hamfest. Parking was good, a big lot in front of the building.

Before the 'fest I encouraged people to try to get actual sales prices. I did manage to do that in a couple of cases.

This was a good day for R-390A's. I saw:

Collins, no covers, owner said bad audio. Ask: $175, Sold at: $135.
Motorola (?, not sure), "works, well", cover, clean. Ask: $300. sold ??
EAC, no cover, product det., solid-state PS mods, clean. Ask: $300, sold $280.

A couple of other things:

Johnson Ranger II, $260
T.O. Keyer, $45
National NC-100, "works", gungy looking, $60.
Gonset G-76, corroded exterior, $125.
RME, VHF-152, dirty!!, $15
Command set receiver, 190-500kc, $??

1k ohm, 160watt wire-wound resistors. A box full at $3 each. A bunch of these can be handy as power supply dummy loads.

The find of the fest: What looked like a signal generator from the '30s (I'd guess). Made by Clough-Brengle. It covered 100kc to 30Mc in 6 bands. Had a switch on the front labeled "Sweep motor". I didn't ask for the price or any more information. Anyone know anything about it?

What hollow-state goodie did I get? None! I am trying to restrain myself from buying anything that would constitute a new project. So it was coax connectors, an HP voltmeter, a pile of Motorola manuals and a fun day looking over the goodies.

73,

Gary